



THE CHAIRSIDE INSTRUCTOR



Dental Health Foundation-Australia

the chairside instructor

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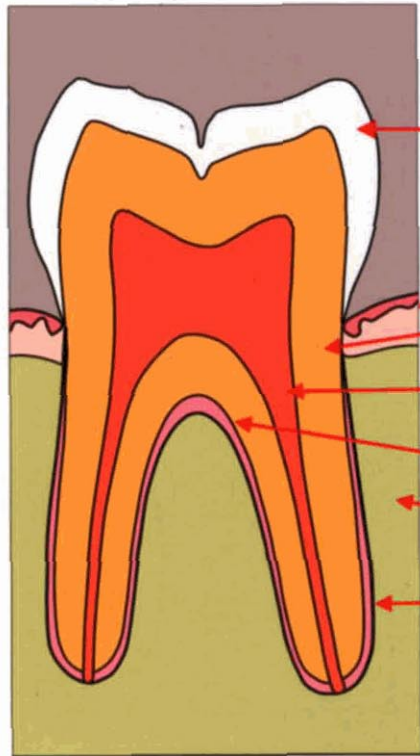
DEDICATED TO THE MEMORY OF THE LATE DR LEONARD HANSEN

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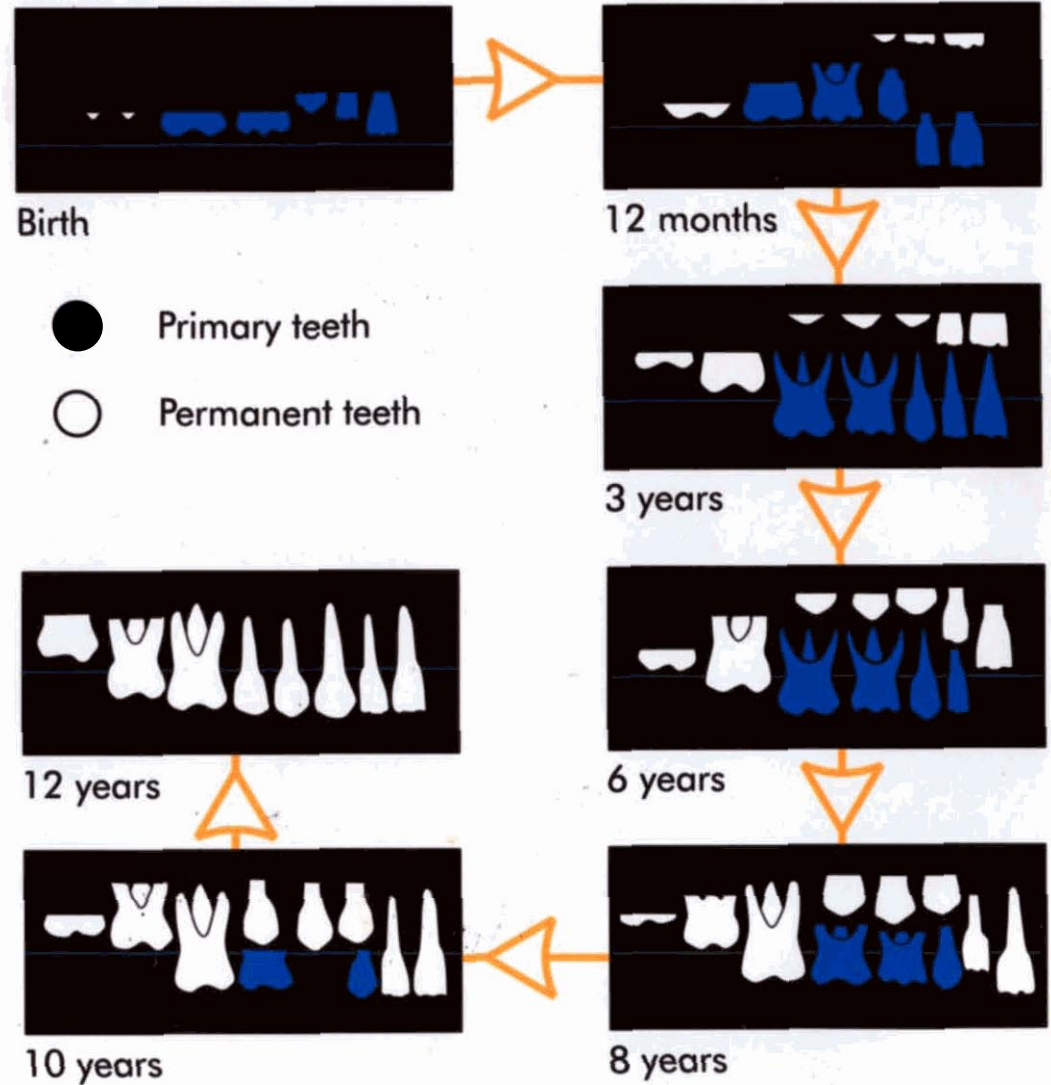
Administrative Office 1-3 Derwent Street Glebe NSW 2037 Australia

a tooth

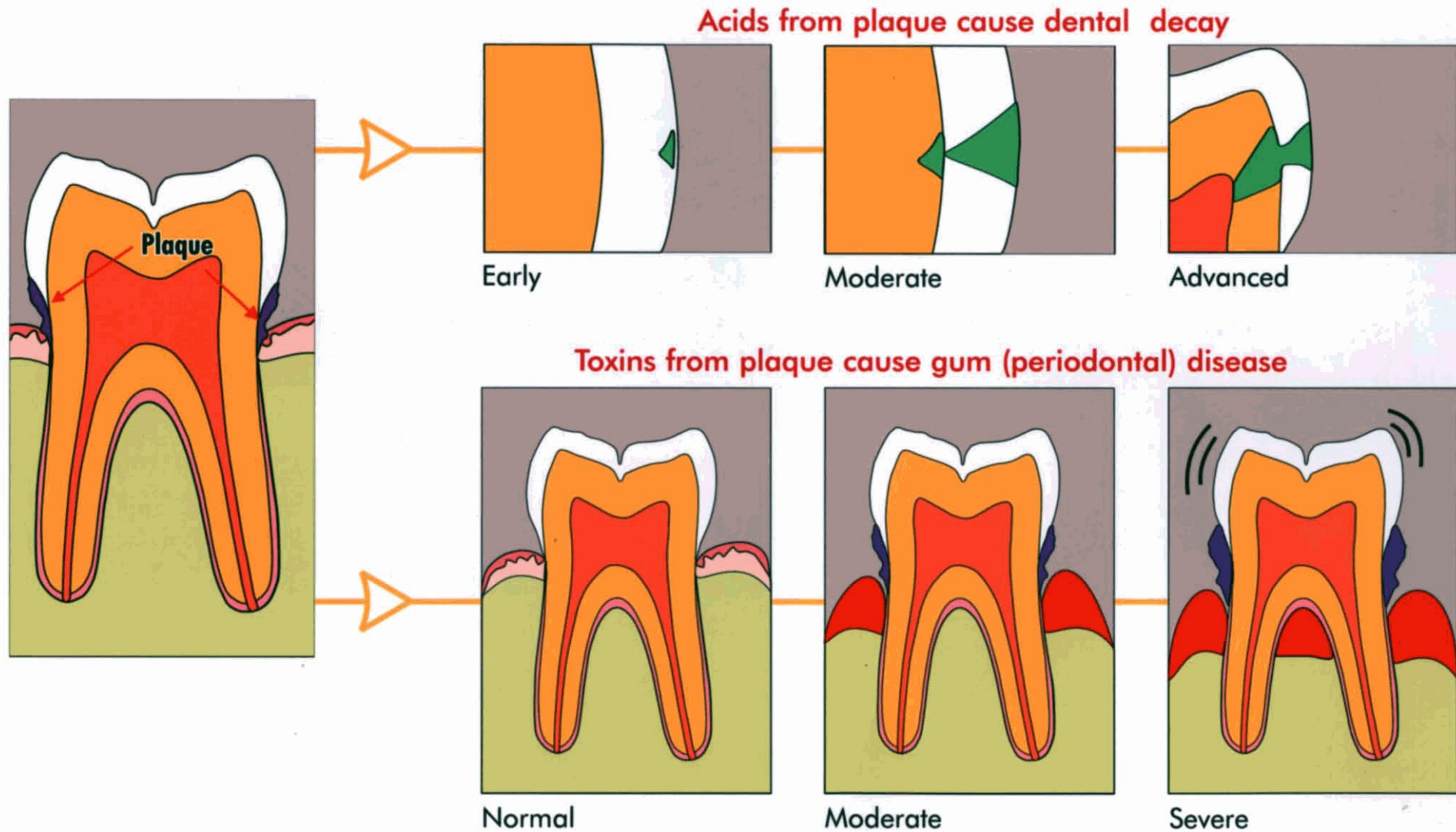


Enamel
Gum
(gingiva)
Dentine
Pulp
(nerve)
Cementum
Bone
Periodontal
Ligament

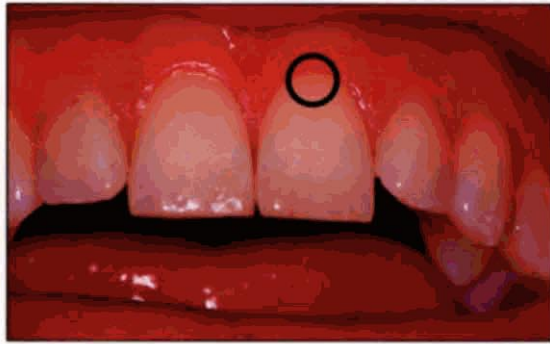
Tooth eruption



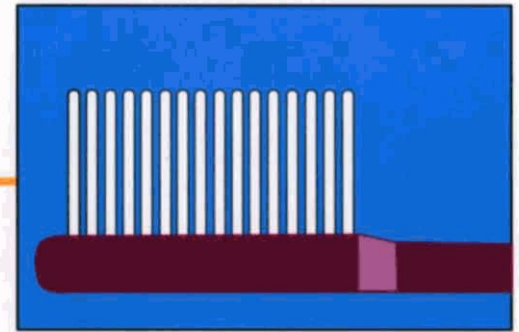
plaque



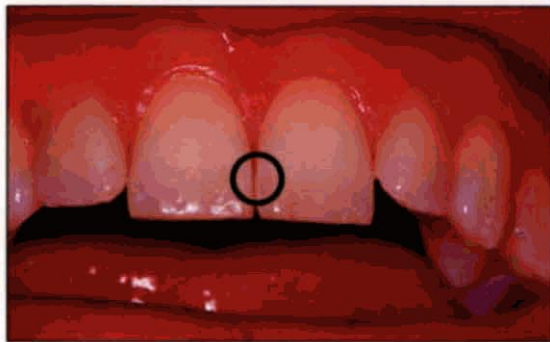
removing plaque



Gum Line



Toothbrush



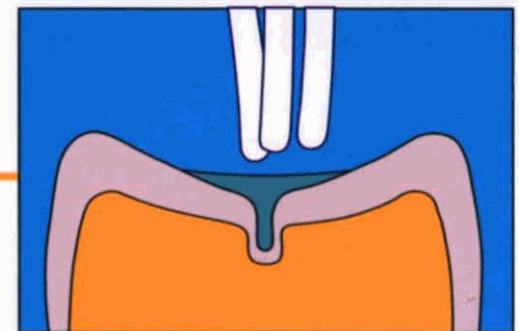
Between Teeth



Dental tape / Dental floss



Biting Surfaces



Toothbrush and fissure sealant

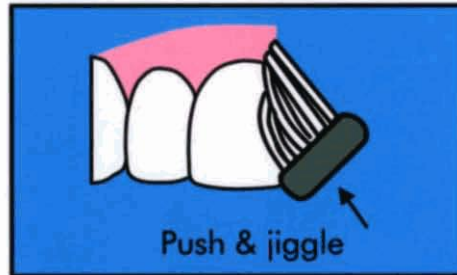
brushing



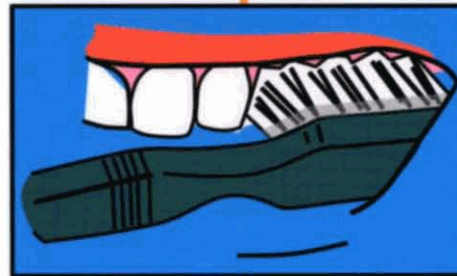
An incorrect toothbrushing action can cause the type of problem shown on page 11 (gum line erosion).

Brushing removes plaque from the inside, outside and the biting* surfaces of the teeth.

* Except in the fissures or grooves of back teeth.



Aim the bristles of a soft toothbrush at the gum line at an angle of 45 degrees. Jiggle the brush in short, half-tooth, movements.



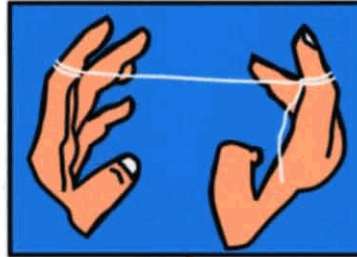
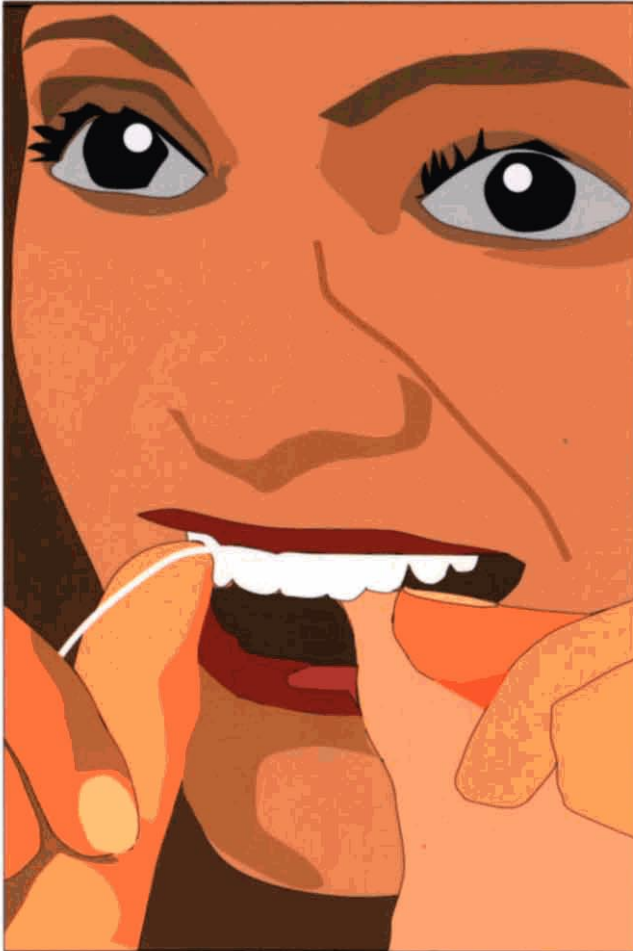
Work around the outside and inside of your upper teeth.



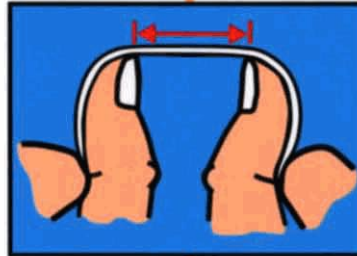
Do the same with your lower teeth - work around the outside and inside.

Then clean the biting surfaces of your back teeth with a gentle scrubbing motion.

flossing



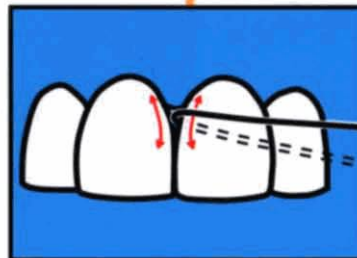
Break off 40 cm (15 inches) of dental floss or dental tape. Wind the ends around your index fingers.



Support the floss or tape with your thumbs. Keep your thumbs as close together as possible.

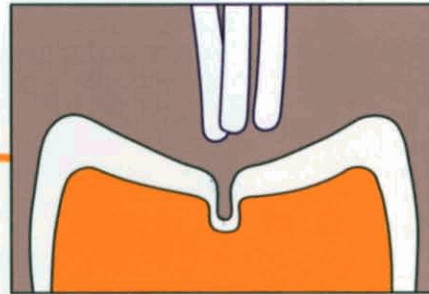
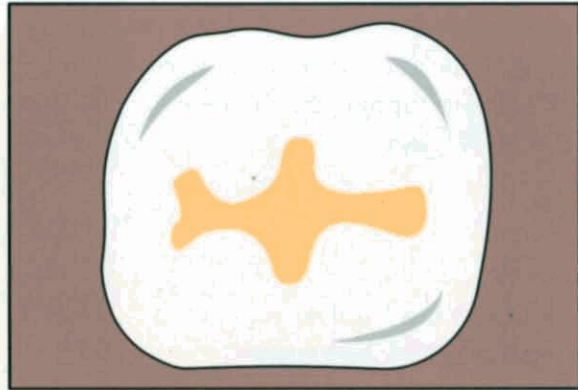


Ease the floss or tape through the tight part with a gentle back and forth motion.

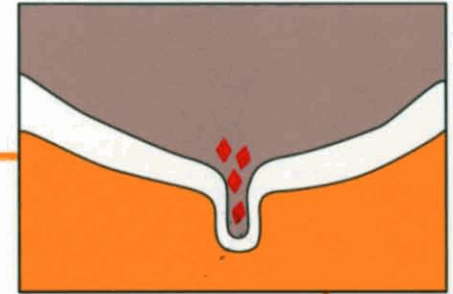


Slide the floss up and down the tooth surface to the gum line and back as shown.

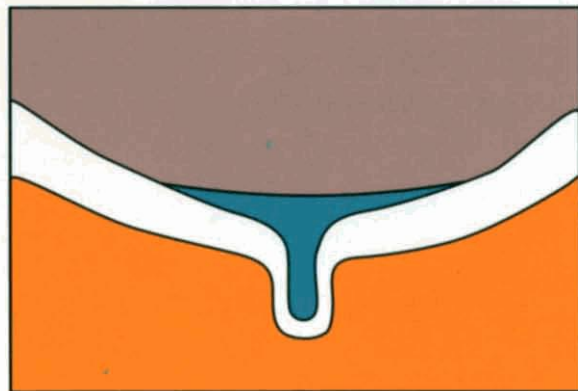
fissure sealing



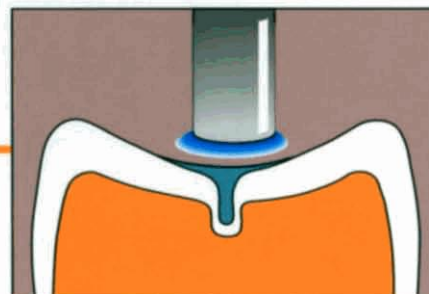
A toothbrush cannot reach into a fissure



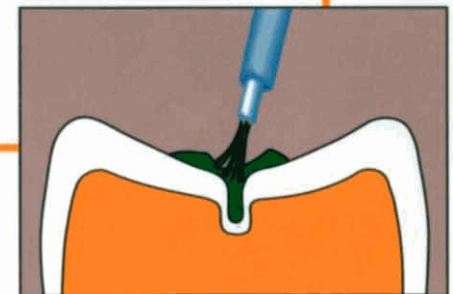
Acids are produced by plaque in the fissure



The resin protects the area against decay



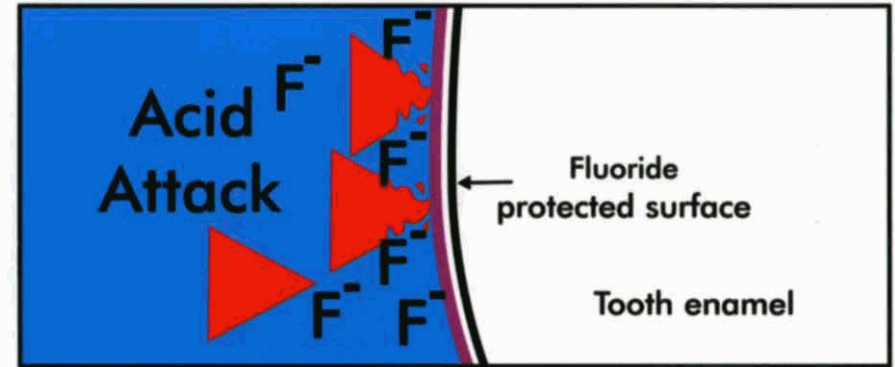
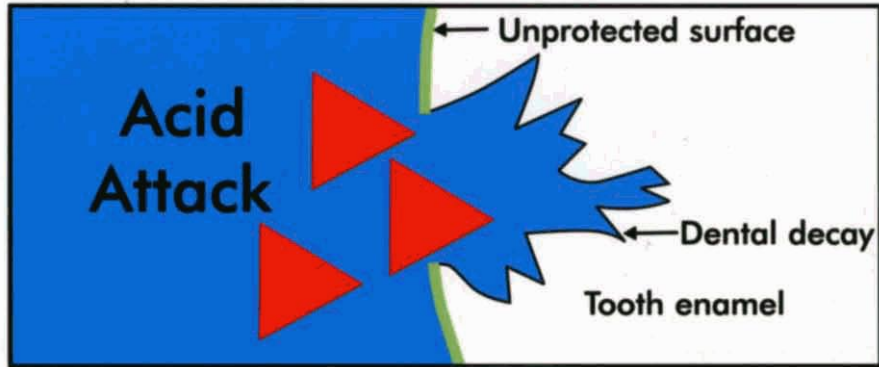
A resin is placed and set hard with a white light



For fissure sealing, enamel is etched with a mild acid - then washed and dried

fluorides

Fluorides protect against tooth decay



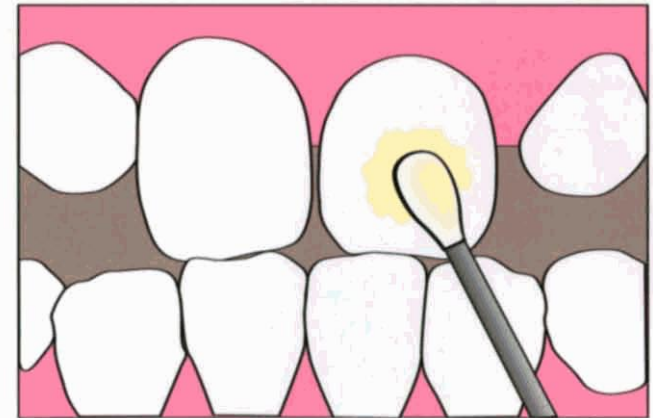
Sources of fluoride



Fluoridated water



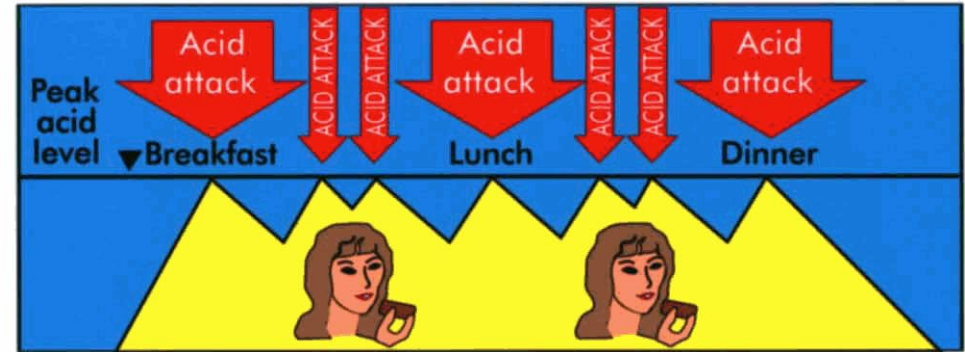
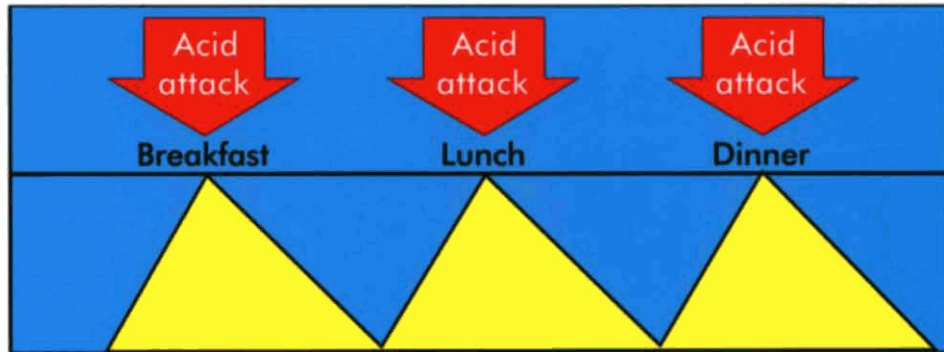
Fluoride toothpaste



Topical application

diet

Reduce between-meal snacks



Follow the Healthy Eating Pyramids

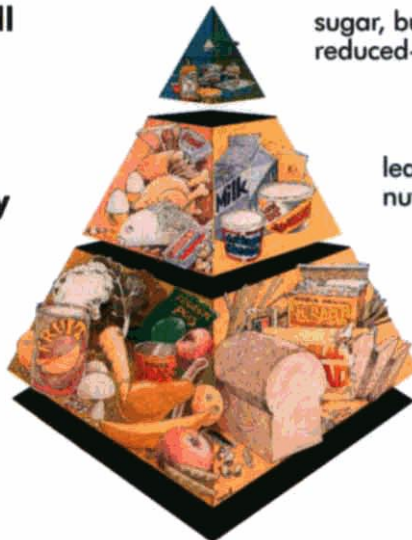
Eat in small amounts

sugar, butter, margarine
reduced-fat spreads, oil

Eat moderately

lean meat, eggs, fish, chicken,
nuts, milk, yoghurt, cheese

Eat most



Eat in small amounts

sugar, butter, margarine
reduced-fat spreads, oil

Eat moderately

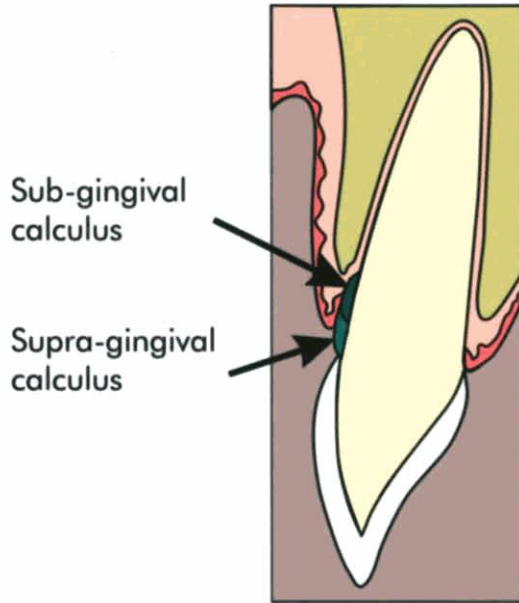
milk, yoghurt, soy drink, cheese
tofu, unsalted nuts, eggs, seeds

Eat most



For Vegetarians

calculus



Sub-gingival calculus

Example

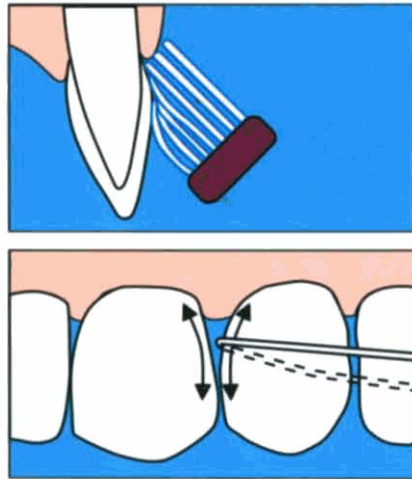


Before removal



After removal

Bleeding gums



Brush and floss more
rather than less each day



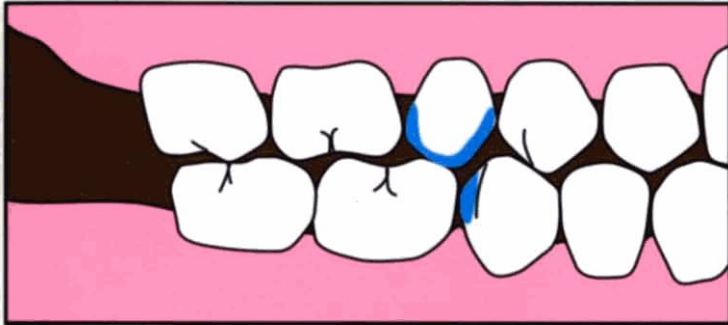
After some initial bleeding
and soreness
(for about 4 days),
gums will be almost healed.



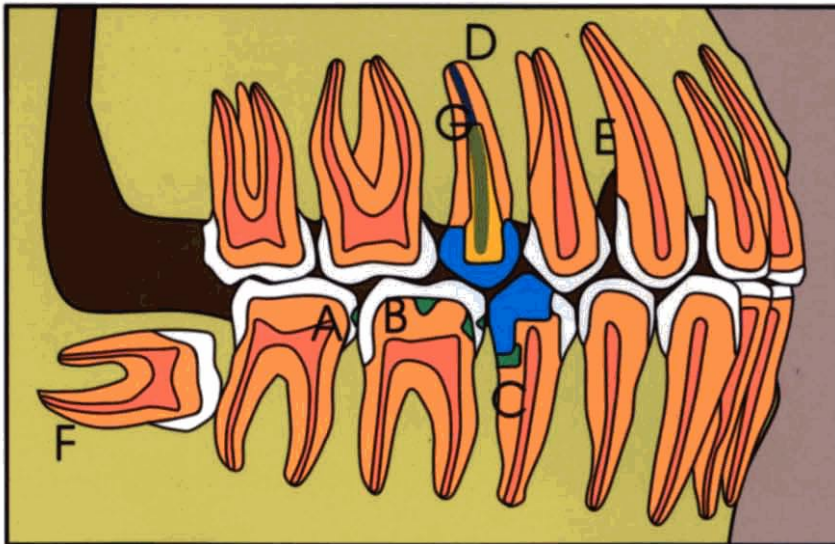
To complete the healing any
calculus is removed (see above)

radiographs

What the eye sees



What a radiograph can see



- | | |
|--------------------------------------|--|
| A Decay between teeth | E Gum (periodontal) problems, in this case localised bone loss |
| B Hidden decay under pits & fissures | F Impacted wisdom (3rd molar) teeth |
| C Decay under leaking fillings | G Post in root canal |
| D Root fillings | |

Types of radiographs

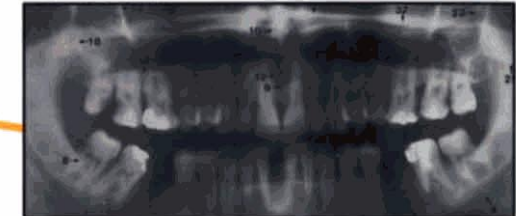
Bitewing



Periapical

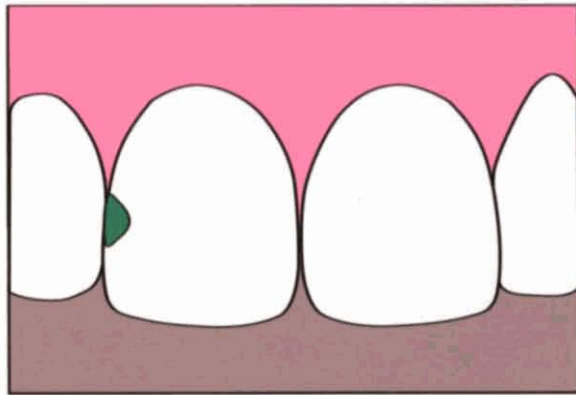


Panoramic

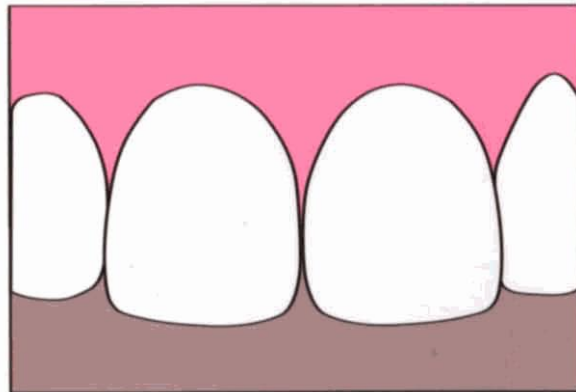


restorations

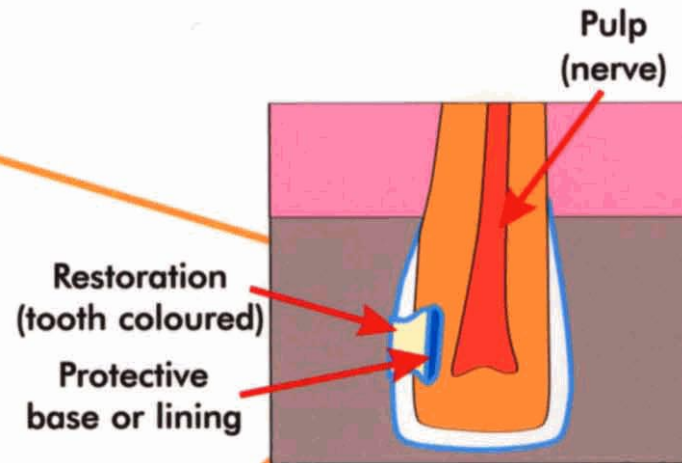
Front Teeth



Before - decay between teeth



After



A typical restoration in a front tooth

Gum line erosion areas



Before



After

Examples



Decay removed



After



Decay removed

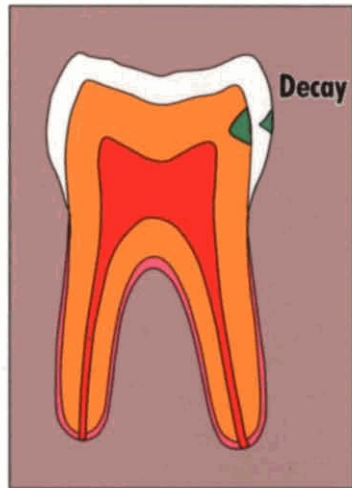


After

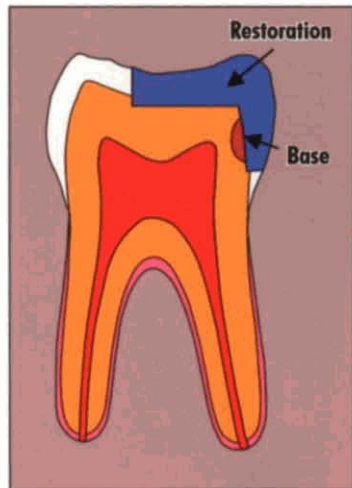
restorations

Back Teeth

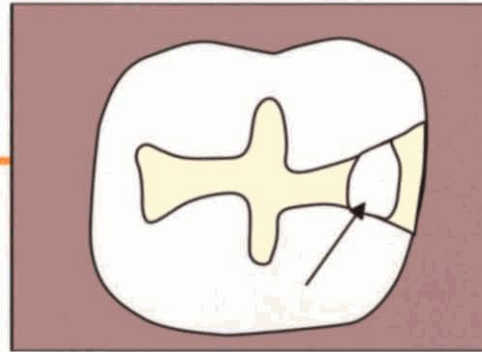
An example of treating decay between teeth



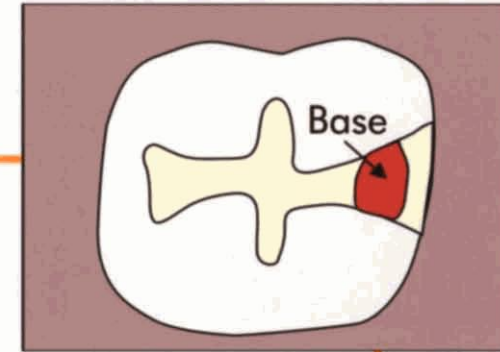
Before



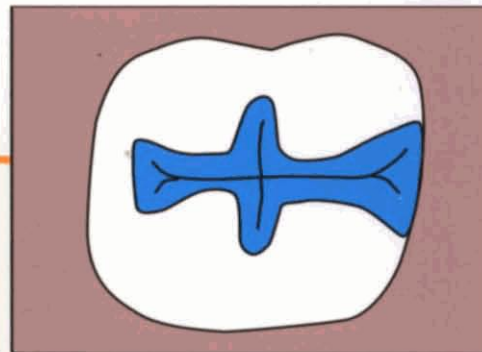
After



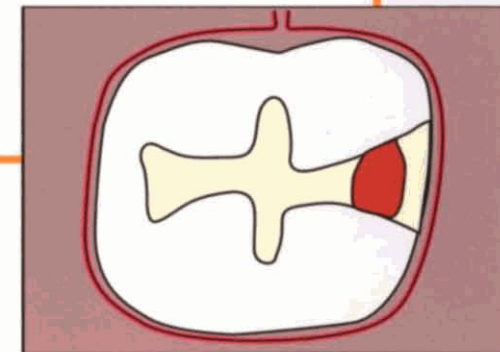
Cavity is cut and the decay removed (arrow)



A protective lining or base is placed



The final restoration can be metal, such as amalgam, or a tooth coloured material



A band is placed around the tooth before the restoration is placed

restorations

Back teeth

Examples

Between teeth - tunnel restorations

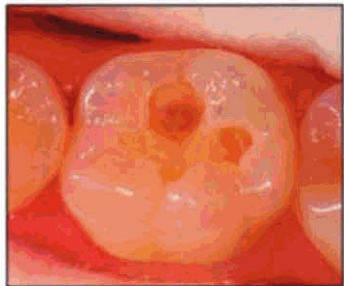


Decay removed

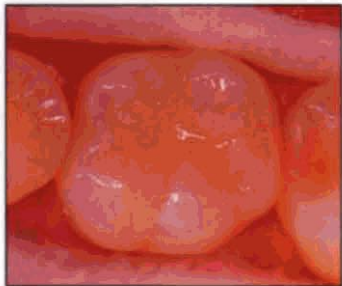


After

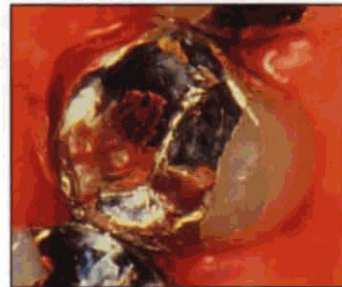
Biting surface - occlusal restoration



Decay removed



After



Example of a large amalgam restoration

Between teeth - Class 2 restorations



Decay removed



After

Gum line erosion areas



Before

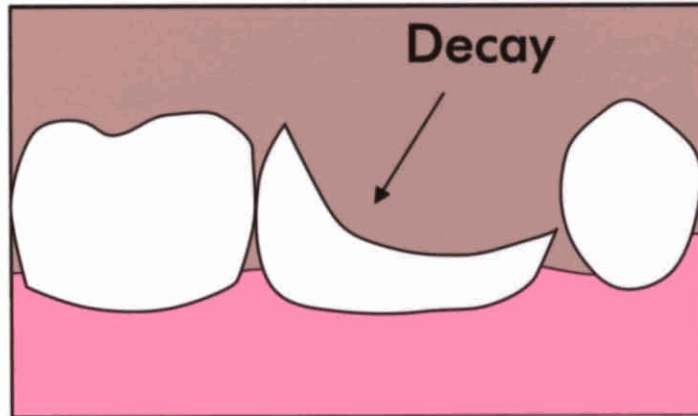


After

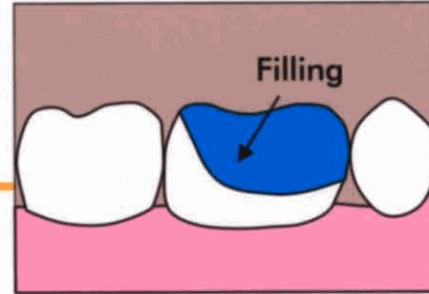
crowns

Full Crown

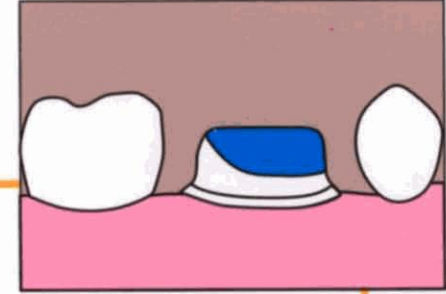
A typical case



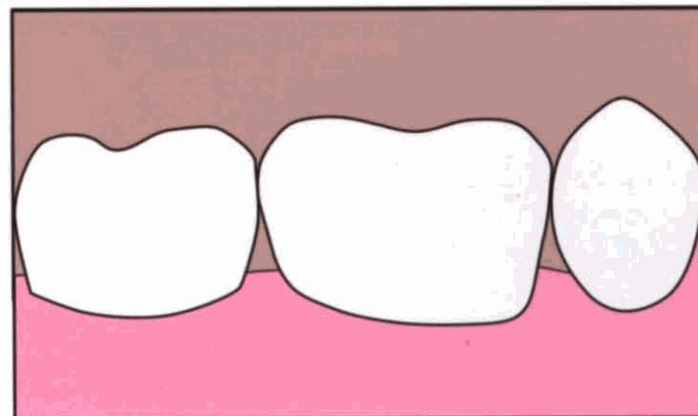
Before



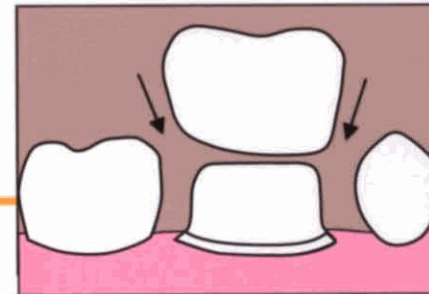
The missing part of the tooth may first have to be built-up with one of the normal filling materials



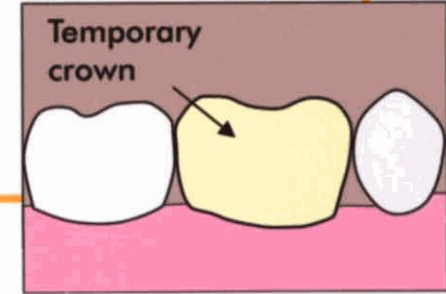
The tooth is then reduced on the top and all sides until it looks like an elongated dome



The crown is cemented in place



The crown is constructed and tried in for fit and, where appropriate, colour

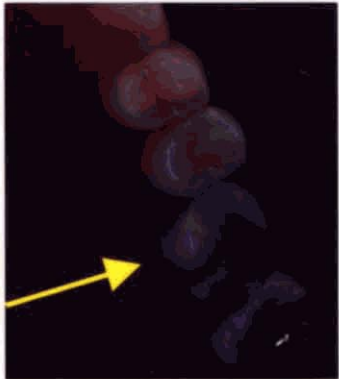


An impression and other records are taken and a temporary crown is fitted

crowns

Back Teeth

Example

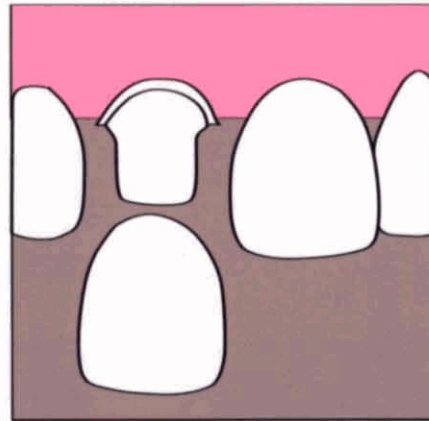


Before

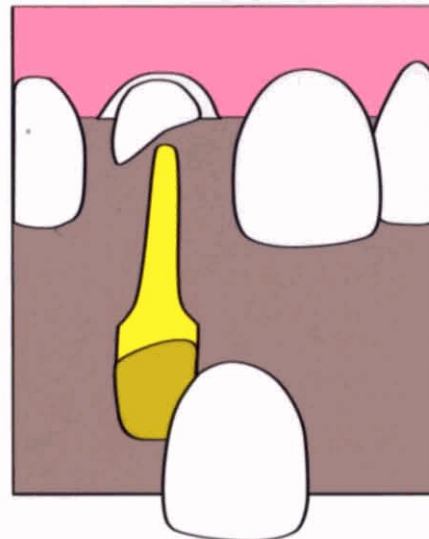


After

Front Teeth

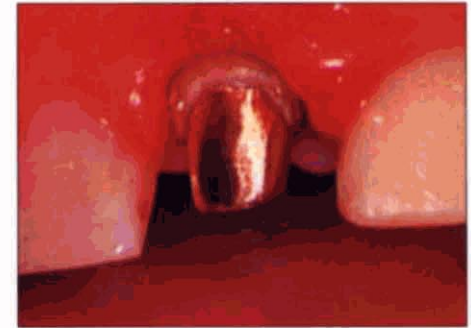


Crown (vital tooth)



Post core and crown
(broken non-vital tooth)

Example



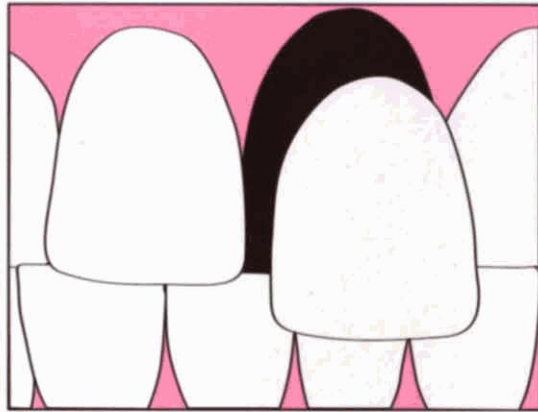
Before
Broken tooth - post core in place



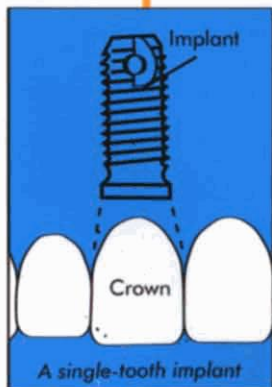
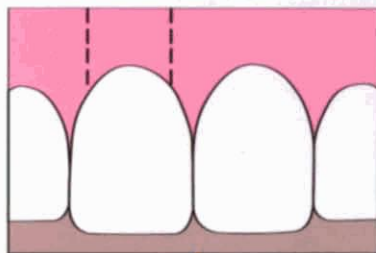
After
Crown in place

replacing a lost tooth

Options

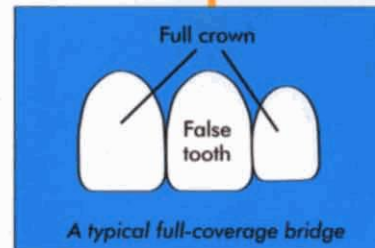
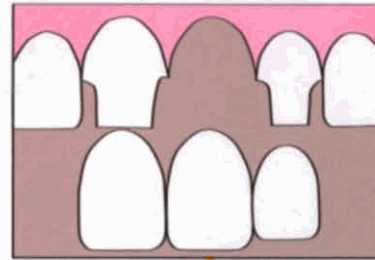


Single tooth implant



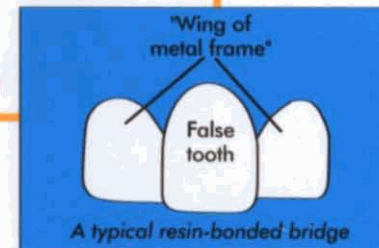
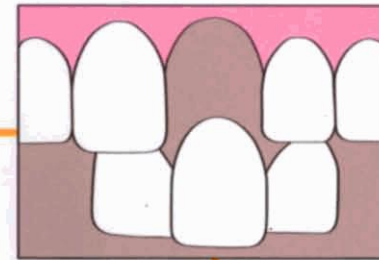
Bridgework

Full coverage



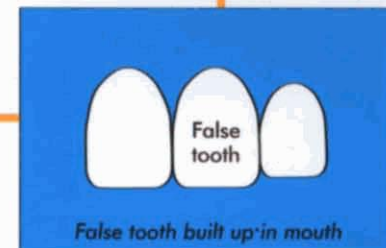
A typical full-coverage bridge

Resin-bonded



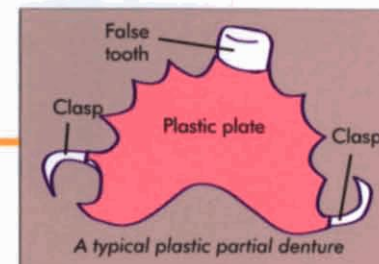
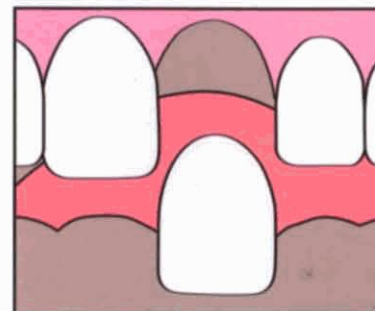
A typical resin-bonded bridge

Direct resin

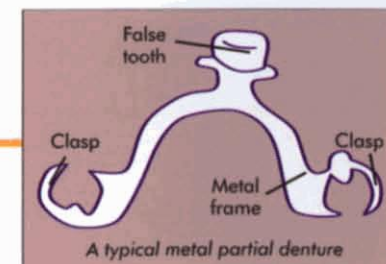


False tooth built up in mouth

Partial Denture



A typical plastic partial denture



A typical metal partial denture

bridgework

Examples

Full coverage



Before



After

Resin-bonded



Before



After

Direct resin



Before



After

single-tooth implants

Lost front tooth

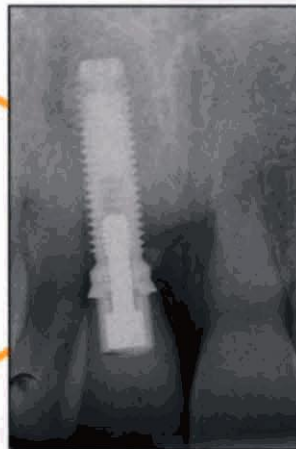


Before



After

Examples



Radiograph of implant
in place

Lost front tooth



Before

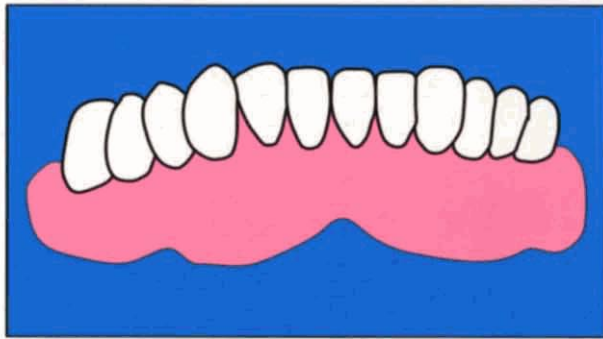


After

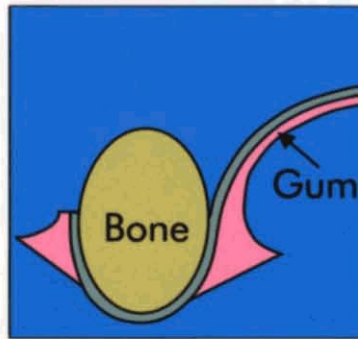
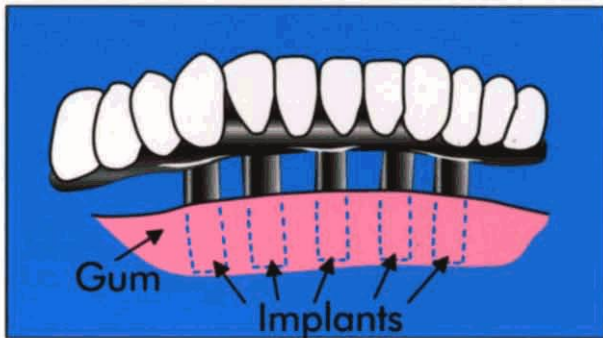
multiple implants

A typical procedure

Example



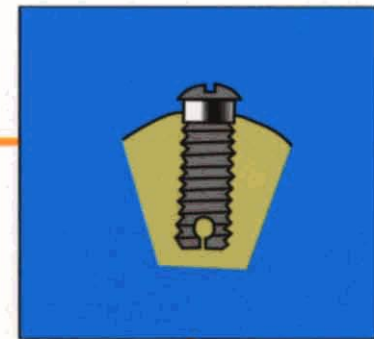
A removable full lower denture (above) can be replaced by teeth fixed to implants (below)



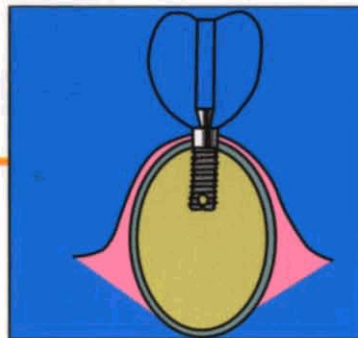
Bone is revealed



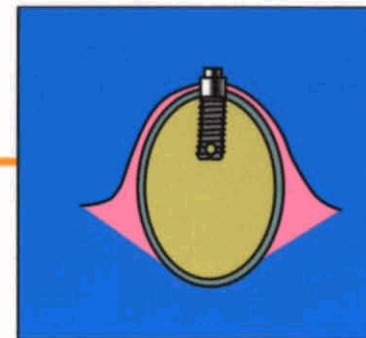
Hole is prepared for implant



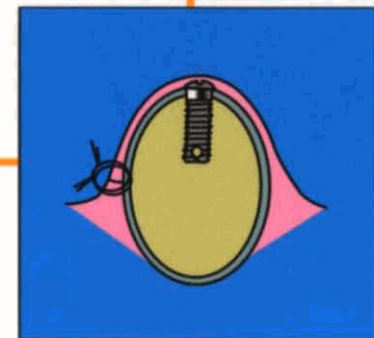
Implant placed



Tooth or teeth fixed to implant

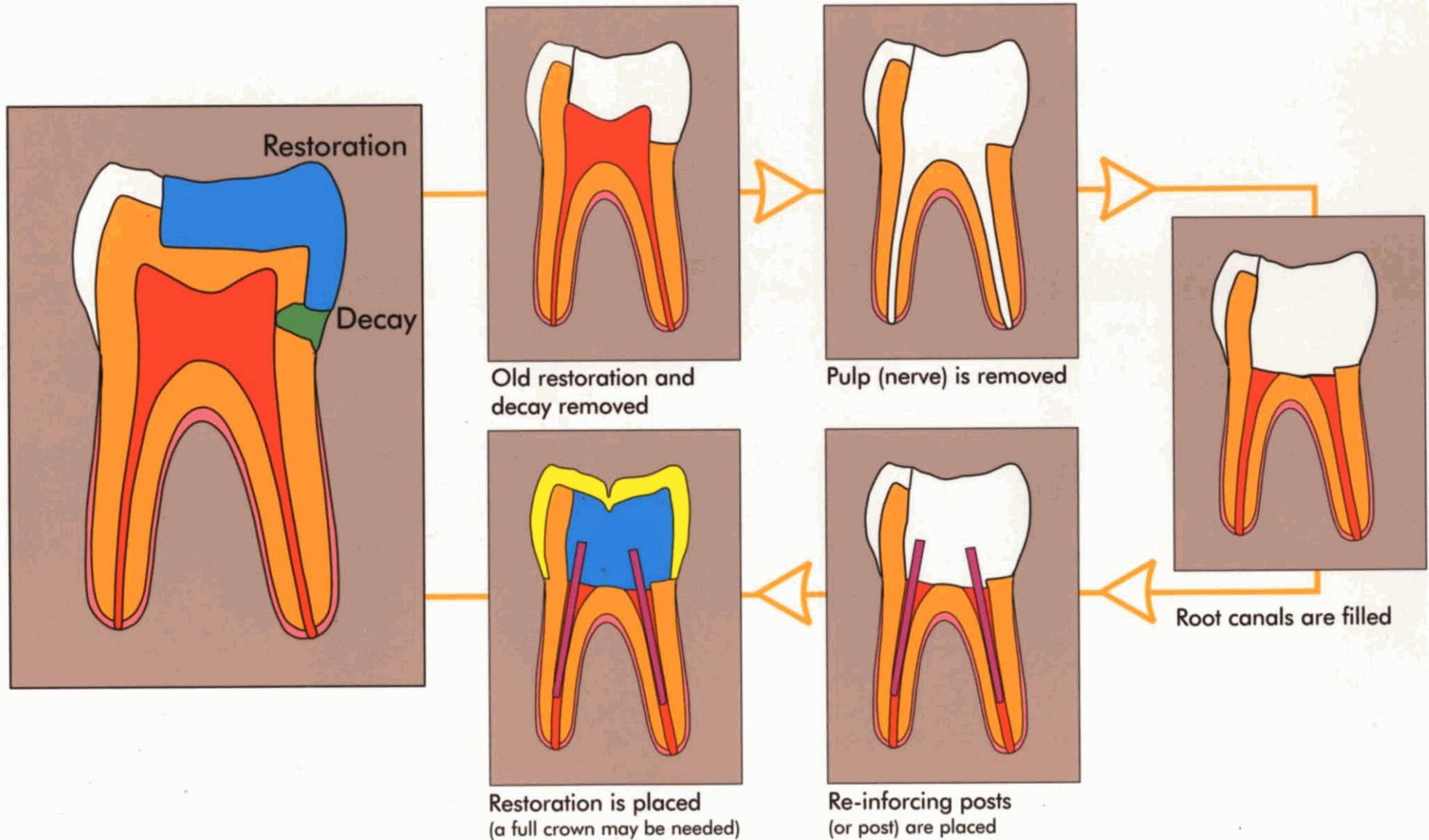


Top of implant is revealed



Gum is replaced and implant left for several months

root canal treatment



orthodontics

Functional appliances

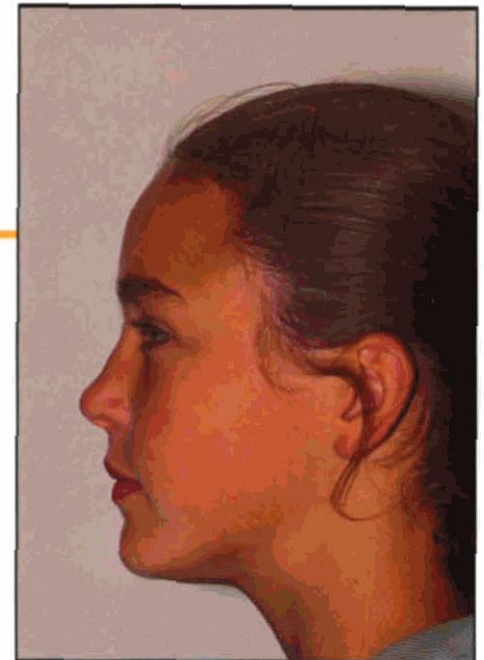


A functional appliance is a special type of plate that assists the proper development of the jaws. It is worn for approximately 12 to 16 hours a day. Treatment is usually started in the period between mid to late childhood and puberty.

Example



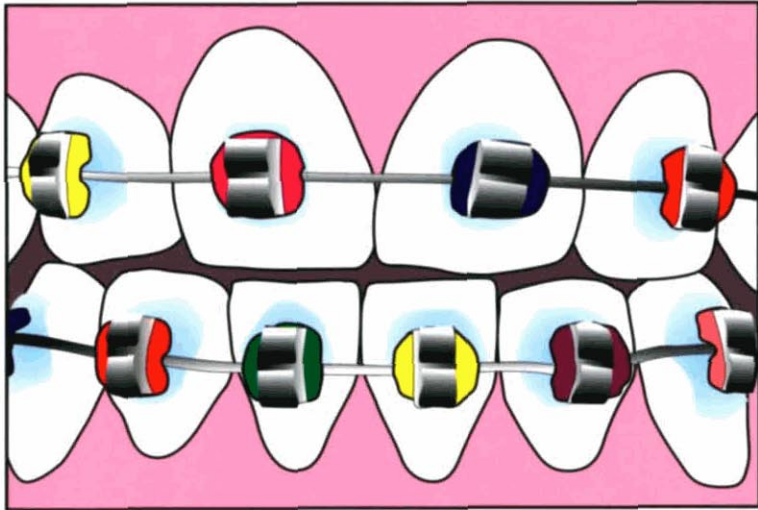
Before



After

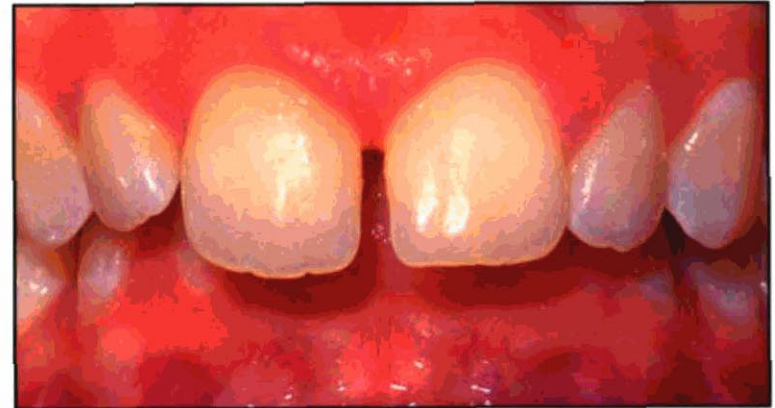
orthodontics

Fixed appliances



- Fixed appliances ("braces") are used mostly for straightening and moving teeth. Treatment often starts after all the permanent teeth have come through which is around puberty.

Example



Before



After

orthodontics

Surgery and fixed appliances

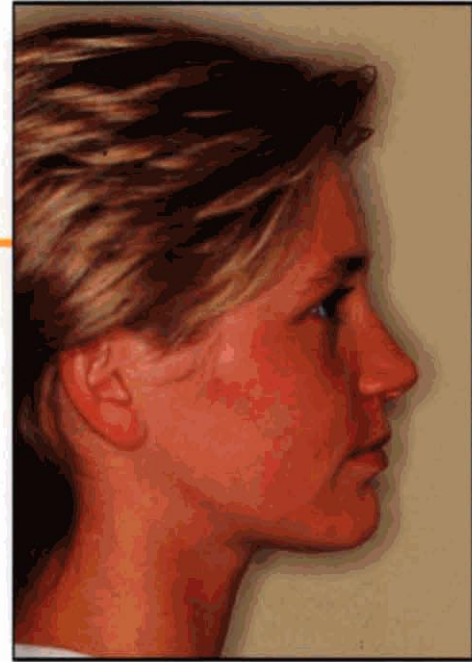


The combination of surgery and fixed appliances is used where "braces" alone will not correct the problem. Treatment is usually not carried out until early adulthood.

Example



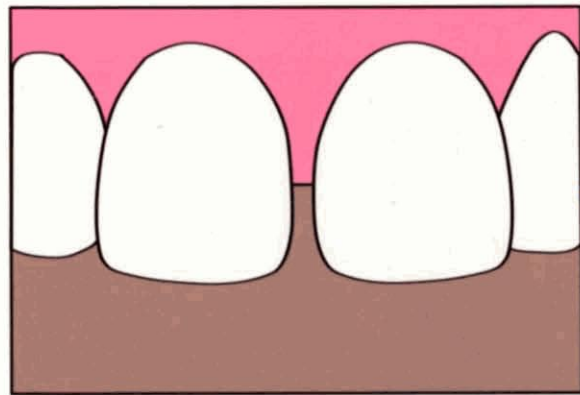
Before



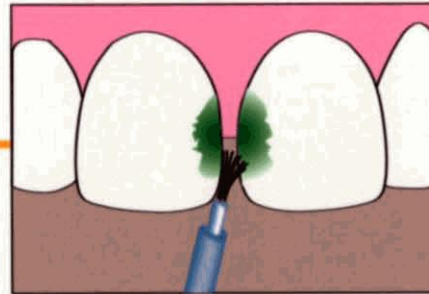
After

tooth bonding

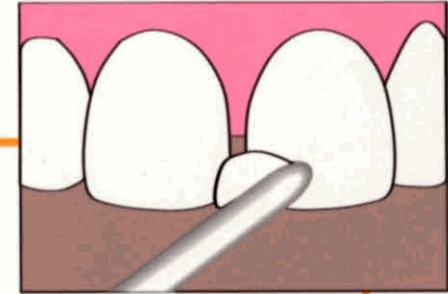
A typical procedure - closing a gap



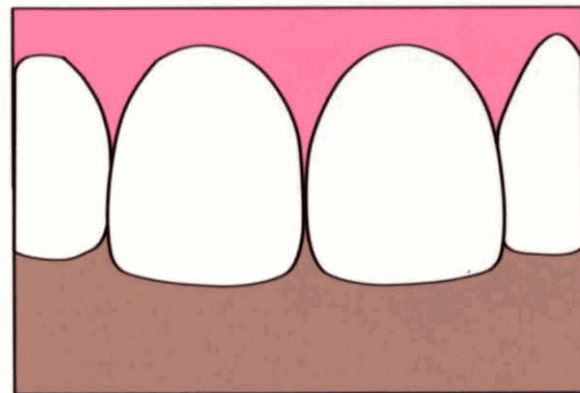
Before



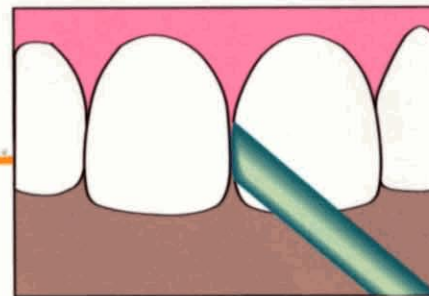
Enamel is etched with a mild acid then washed



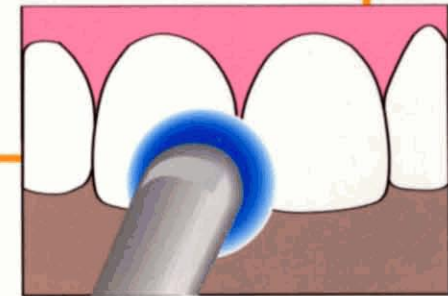
Bonding resin is applied followed by composite resin



After



The resin is finished and polished



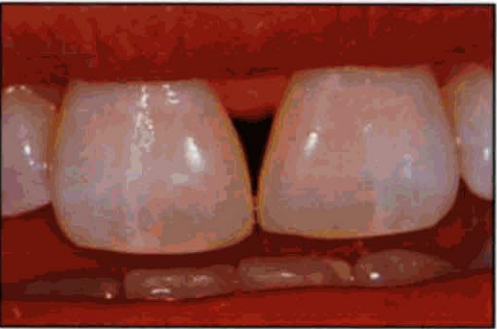
The resin is set hard with a white light

examples of tooth bonding

Closing a gap

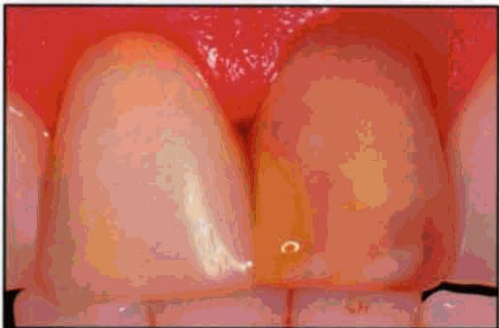


Before

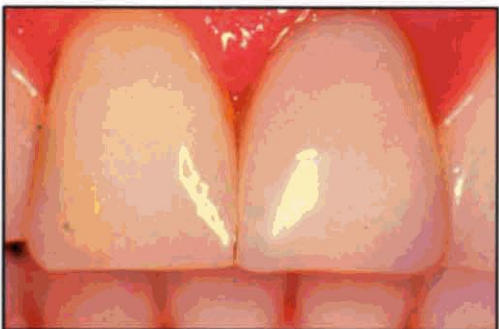


After

Dark tooth



Before

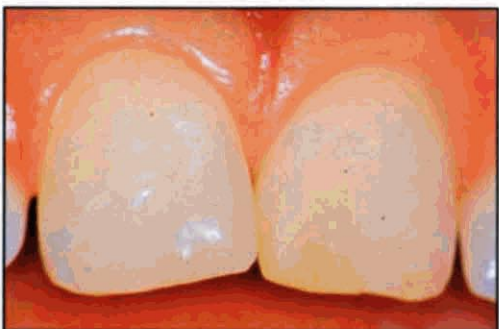


After

Chipped teeth

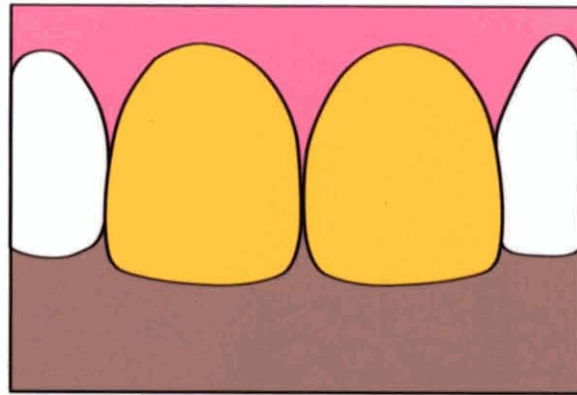


Before

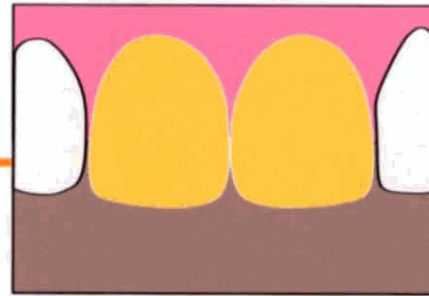


After

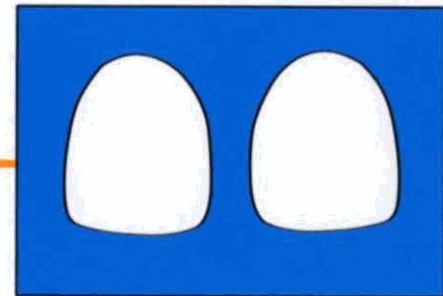
porcelain veneers



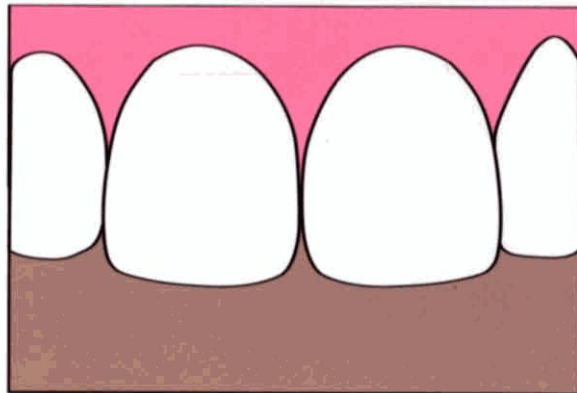
Before



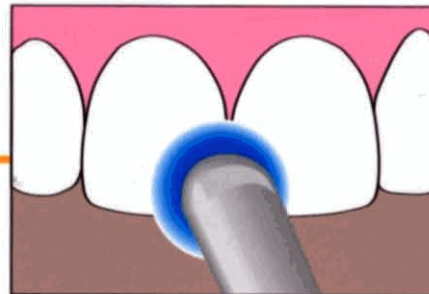
The tooth surfaces are reduced slightly



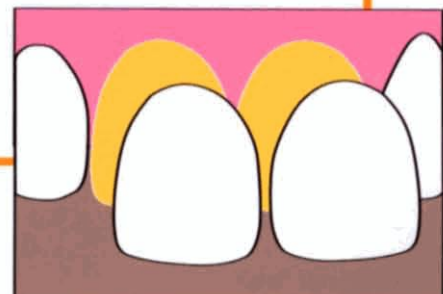
Impressions are taken and the veneers are made in a laboratory



After



The veneers are bonded in place



The veneers are tried in place

examples of porcelain veneers

Stained and worn teeth



Before



After

Badly stained teeth



Before



After

Chipped tooth and a stained tooth



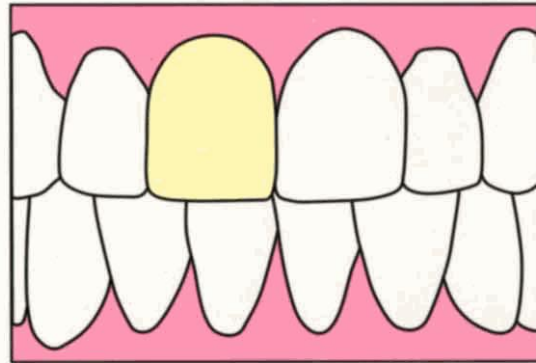
Before



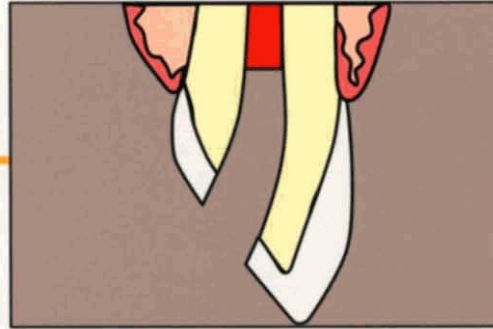
After

bleaching

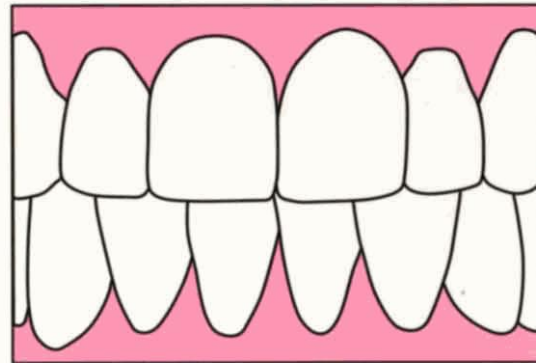
Non-vital tooth



Before



The old filling is removed



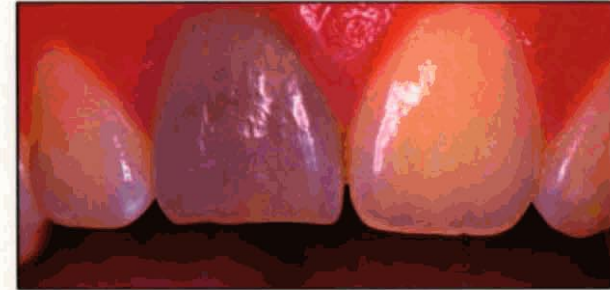
After

Bleaching material is removed and the tooth is filled

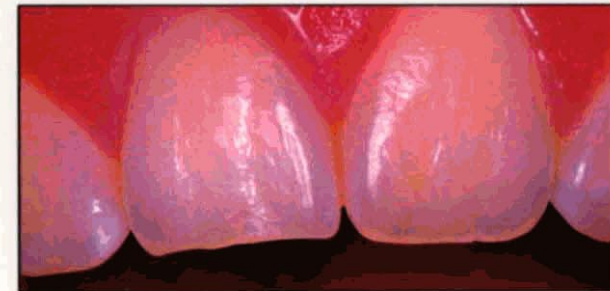


Bleaching material is placed inside the tooth and temporarily sealed in

Example



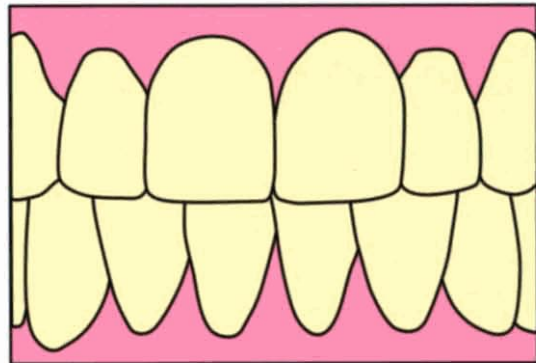
Before



After

bleaching

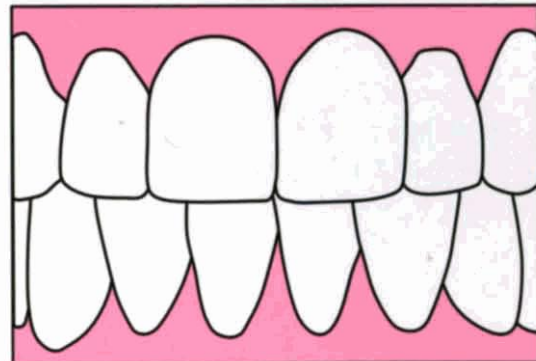
Home treatment



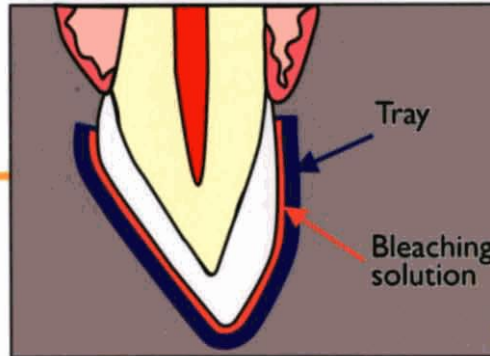
Before



A special tray is made to cover the teeth



After



The bleaching solution is put in the tray and the tray is worn at home

Example



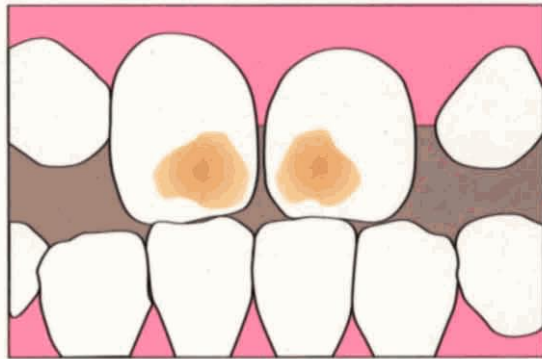
Before



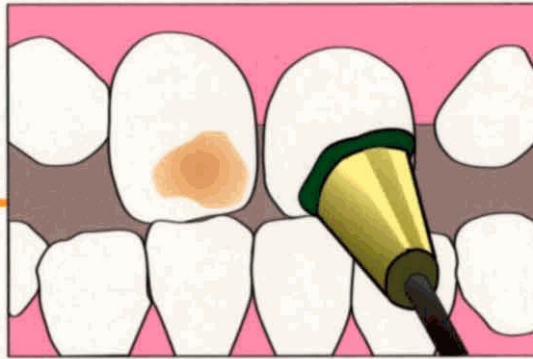
After

microabrasion

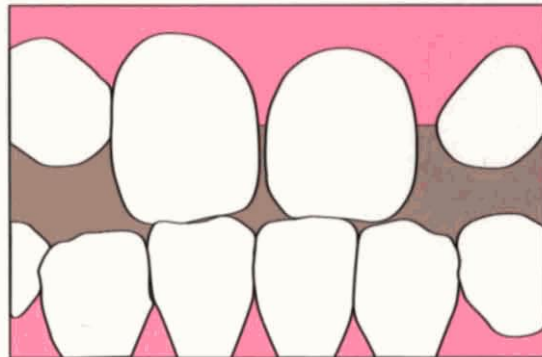
Used for some blemishes on teeth



Before



Teeth are cleaned with a pumice / phosphoric acid mixture for about 3 minutes



After



Fluoride is applied and a fluoride toothpaste is used at home

Example



Before



After

TMJ (temporomandibular joint) problems

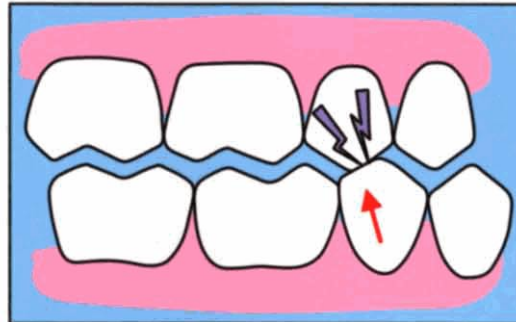
Examples of treatment



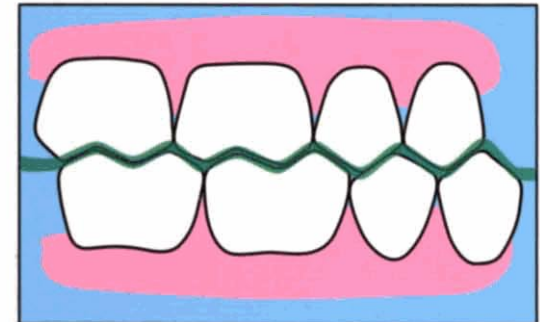
The temporomandibular (jaw) joint is located just in front of the ear. Joint problems may show up as;

- ▲ Pain in the ear area sometimes spreading to the face
- ▲ Tenderness of the chewing muscles
- ▲ Clicking or a popping noise on opening or closing the mouth
- ▲ Difficulty in opening the mouth
- ▲ A jaw that "locks"
- ▲ Pain when chewing
- ▲ Certain types of headaches or neckaches

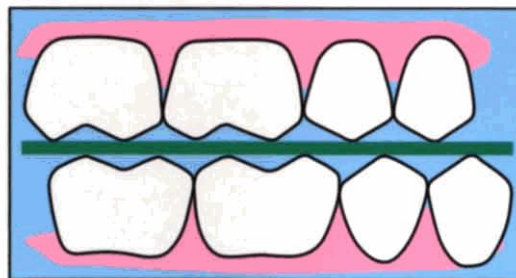
Removal of part of a filling or tooth that is jutting out



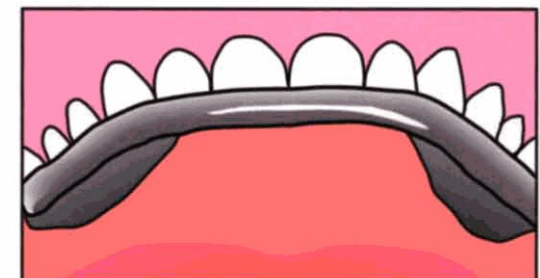
Before



After



Separating the teeth



By wearing a bite plate

Relaxation techniques



wisdom teeth

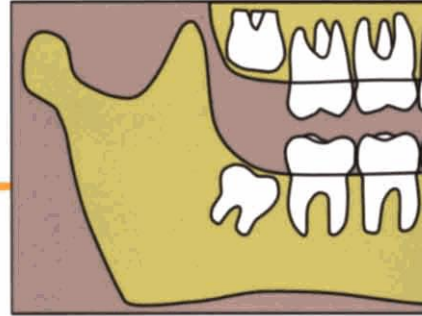
(Third molars)



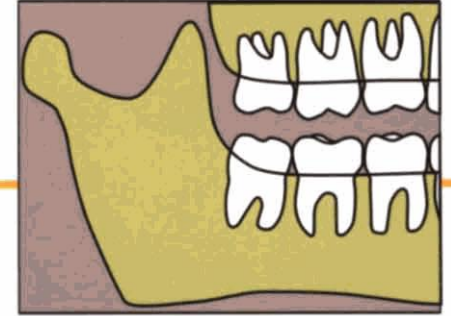
Before



After



Third molars (wisdom teeth) are the last teeth to develop. They grow inside the bone at the back of the mouth.



If the jaws grow long enough the third molars can fit in and be useful like any other tooth.



Impacted third molars can cause a number of problems including:

- A dull pain in the jaws
- Infection in the overlying gum
- Damage to the tooth in front



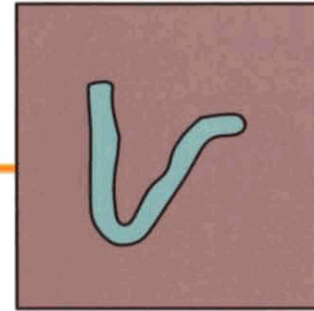
However, if the jaws do not grow long enough the third molars stay trapped (impacted) inside the bone.

mouthguards

Examples of custom-made mouthguards



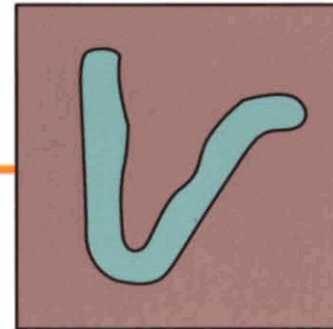
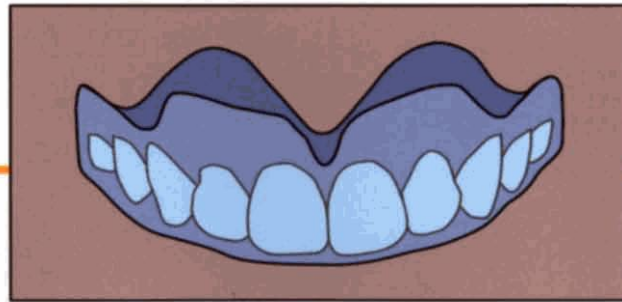
Light type



Soft pliable mouthguard for low impact sports and young people (mixed dentition stage)



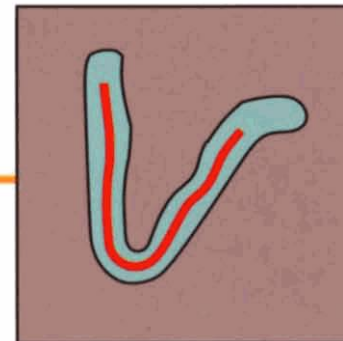
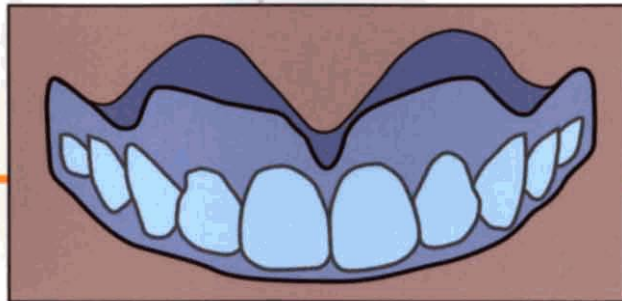
Medium type



All purpose mouthguard



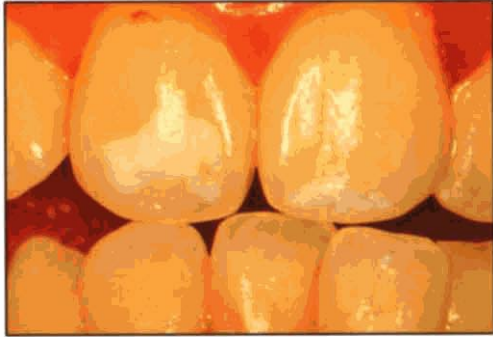
Heavy / Professional type



Mouthguard reinforced with a hard insert. For high impact sports and sports involving raquets or sticks

blemishes on front teeth

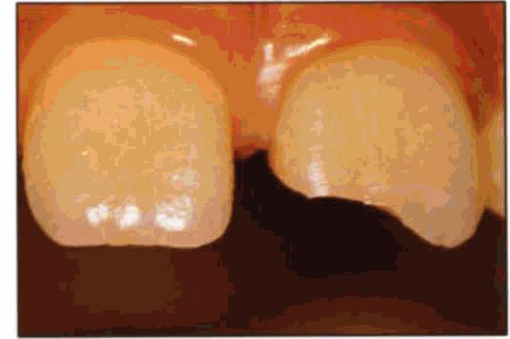
Examples



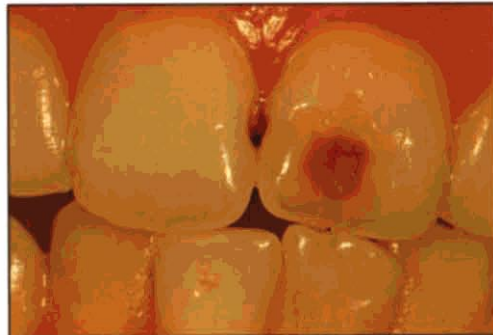
A



C



E



B



D

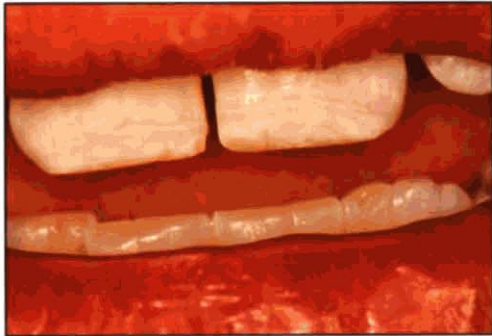


F

- A White areas (demarcated opacities) may be inherited or caused by a childhood illness or an injury to the preceding primary (baby) teeth
- B Enamel defect (hypoplasia). This type is usually caused by an injury to the preceding primary (baby) tooth
- C Enamel defects (hypoplasia). This type is usually related to a severe childhood illness
- D Mild fluorosis (diffuse opacity)
- E Chipped front tooth as a result of an injury
- F Severe tetracycline (an antibiotic) staining

blemishes on front teeth

Chronic mouth breathing



Chronic mouth breathing can cause this type of white marking on front teeth



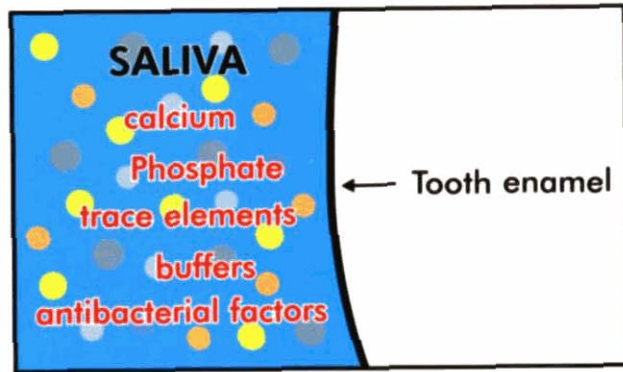
Some chronic conditions, such as a blocked nose, can cause a child to habitually breathe through his or her mouth. The teeth can become dessicated and the lips very dry

Bed-time bottle



This type of decay can be caused by a child being allowed to go to sleep with a bottle containing milk (even breast milk), formula, fruit juices or sweetened liquids

reduced flow of saliva



Saliva contains many ingredients that help prevent tooth decay. If the flow of saliva is reduced and proper hygiene is not followed, serious problems can occur, especially in seniors.

(Factors that can cause reduced salivary flow include radiotherapy, some medications, some illnesses as well as the ageing process)

Examples of the effect of a reduced flow of saliva with and without the proper preventive program

With preventive program



Teeth before radiotherapy



Good oral hygiene and use of a fluoride gel in a tray at home



Teeth 18 months after radiotherapy (no change)

Without preventive program



Teeth before radiotherapy



Teeth 12 months after radiotherapy (gross destruction)

acknowledgements

Clinical photographs

Page 9	Dr Chris Daly, Sydney NSW
Page 11	Top right - Dr Eddie Bass, Sydney NSW Middle - Dr Graham Mount, North Adelaide SA Lower right - Dr Phillip Zoldan, Maroubra Junction NSW
Page 13	Top left - Dr Geoffrey Knight, Brighton Vic Top right - Dr Eddie Bass, Sydney NSW Lower left - Dr Eddie Bass, Sydney NSW Lower right - Dr Graham Mount, North Adelaide SA
Page 15	Left - Dr Jim Ironside, Surry Hills NSW Right - Dr Eddie Bass, Sydney NSW
Page 17	Left - Dr Terry Walton, Sydney NSW Middle - Dr Thomas Tseng, Kincumber NSW Right - Dr Geoffrey Knight, Brighton Vic
Page 18	Left - Dr Richard Chan, Sydney NSW Right - Dr Terry Walton, Sydney NSW
Page 21	Dr Dan Vickers, Gordon NSW
Page 22	Dr Dan Vickers, Gordon NSW
Page 23	Dr Stephen Duncan, Sydney NSW
Page 25	Left - Dr Keith Powell, Burwood NSW Middle - Dr Phillip Zoldan, Maroubra Junction NSW Right - Dr Keith Powell, Burwood NSW
Page 27	Dr Richard Chan, Sydney NSW
Page 28	Dr Eddie Bass, Sydney NSW
Page 29	Dr Geoffrey Knight, Brighton Vic
Page 30	Dr Keith Powell, Burwood NSW
Pages 34-35	Dr Graham Craig, Glebe NSW; Dr Keith Powell, Burwood NSW. Baby Photo - courtesy Australia's Parents Magazine, St Leonards NSW.
Page 36	Dr Chris Daly, Sydney NSW

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